

Amendments to the Specification

Please replace paragraph [0021] with the following paragraph:

[0021] Various embodiments of the invention include localized delivery of ion-modulated ion-modulated brain fluid as well as dispersed delivery mechanism, such as a leaky catheter. By replacing the brain fluid at a modified ion concentration, it is possible to change the electrical potential difference between intra-cellular and extra-cellular brain fluid.

Please replace paragraph [0035] with the following paragraph:

[0035] The unequal distribution distributional of ions raises several important questions, such as how do ionic gradients contribute to the resting membrane potential, and how are they maintained, and what prevents the ionic gradients from dissipating by diffusion of ions across the membrane through the passive (resting) channels. These questions are interrelated and can be answered by considering two examples of membrane permeability: the resting membrane of glial cells, which is permeable to only one species of ions, and the resting membrane of nerve cells, which is permeable to three. For the purposes of this discussion we shall consider only the resting ion channels, which are always open.